

LISTing Newsletter

Newsletter of the Long Island Sinclair/Timex Users Group
(Incorporating N.Y.T.S.E.)

Holiday
1992

December 1992 Issue



ALL THE NEWS THAT'S
FIT TO PRINT

**Next meeting
DEC 13, 1992**

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Listing Policy

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NYTSE

NYTSE MEETS ON MONDAY THE WEEK
AFTER THE LIST MEETING AT:
MISS KIMS RESTAURANT
PARK AVENUE SOUTH
BETWEEN 21 ST. AND 22 ST.
MEETINGS START 7:30 PM.

COMING EVENTS:

DEC. 13, 1992 LIST MEETING.
DEC. 21, 1992 NYTSE MEETING

MEETING MINUTES
REPORTED BY:
FRED STERN

NOV. 8, 1992

HARVEY CALLED THE MEETING TO
ORDER AT 2:15PM.

IN OUR CORRESPONDENCE WE RECEIVED
2 MEMBERSHIP RENEWALS AND 1
NEW MEMBERSHIP.

LIST MADE A BULK PURCHASE FROM
MR. WILLIAM VOLK. ITEMS INCLUDED
BOOKS, BLANK CASSETTE TAPES, OLD
NEWSLETTERS AND MAGAZINES
RELATING TO T/S COMPUTERS, PRO-
GRAMS FOR THE TS1000 AND TS2068,
A G.E. PROGRAM CASSETTE RECORDER
WITH ATTACHMENTS FOR THE ATARI
AND COMMODORE COMPUTERS.
ED LEE DONATED 2 TS1000, 1 TIMEX
16K RAM PACK, A MEMOTECH KEY
BOARD, AND ASSORTED TS1000
PROGRAMS.
THE ABOVE ITEMS WILL BE AUCTION-
ED AT A FUTURE MEETING.

TOM REPORTED THAT HE HAS RECEIVED
A LETTER FROM SINC-LINK.
THEY WILL BE REINSTATED IN THE
NEWSLETTER EXCHANGE.

AN OPENED DISCUSSION FOLLOWED
ABOUT PURCHASING ITEMS FROM
CATALOG OR MAGAZINES FROM OVER
SEAS. PROBLEMS HAVE OCCURED WHEN
MAKING A PURCHASE WITH A CREDIT
CARD. IT APPEARS THAT SOME SMALL
VENDORS HAVE BEEN ILLEGALLY MAK-
ING PURCHASES WITH CUSTOMER
CREDIT CARD NUMBERS. THIS HAS
PROMPTED FINANCIAL INSTITUTIONS
TO IMPOSE A WAITING PERIOD BE-
FORE AUTHORIZING A VENDOR TO BE
ALLOWED TO HONOR CREDIT CARD
PAYMENTS.

DEMONSTRATION

MIKE AND FRED STERN HELD A
DOUBLE DEMONSTRATION. FIRST WAS
SHOWN A COMPARISON OF TWO TS1000
COMPUTERS, ONE WITH UHF VIDEO
MODULATION AND THE OTHER WITH
UHF VIDEO MODULATION. THE UHF
VIDEO WAS MUCH CLEARER AND FREE
OF HERRING BONE INTERFERENCE
WHEN COMPARED TO UHF.

FRED THEN DEMONSTRATED VARIA-
TIONS OF THE ZX-81 COMPUTER. ONE
STOCK ZX-81 HAD THE ORIGINAL UHF
VIDEO THAT SINCLAIR SOLD THE
UNIT WITH. IT WAS MODIFIED WITH
2K INTERNAL MEMORY, A CHIRPER
CIRCUIT AND CLIK-IT KEYBOARD.

CLASSIFIEDS

THIS CLASSIFIED SECTION IS
AVAILABLE TO ALL LIST MEMBERS
FREE OF CHARGE.
THE ONLY RESTRICTION IS THAT
IT IS TO BE USED ONLY FOR THE
SEEKING, SELLING OR SWAPPING
OF SINCLAIR, TIMEX OR MICROAGE
COMPUTER EQUIPMENT, PERIPHERALS
AND SOFTWARE.
LISTING, LIST, AND ITS OFFICERS
DO NOT ENDORSE, WARRANTY, OR
GUARANTEE ANY OF THE ITEMS
LISTED IN THIS CLASSIFIED
SECTION

THE FOLLOWING PUBLICATIONS ARE
AVAILABLE ONLY THROUGH LIST:

ZX-81/TS1000 TECHNICAL TIDBITS
TECHNICAL TIDBITS PART II
SAVINGS AND LOAD OF THE TIMEX
COMPUTER
\$4.00 EACH.

I AM INTERESTED IN AN AERCO LISK
SYSTEM FOR THE TS1000 OR TS2068.
FRED STERN, 515-737-263 OR
WRITE ME AT THE ADDRESS ABOVE.

WANTED: WAFERS FOR A-J MICRO-
DRIVE (2068 VERSION); ARTWORK;
2068 STUFF YOU WANT TO SELL.
MIKE STEPHEN
312 NEWTON AVENUE
OAKLAND, CA. 94605-1320

A FINAL WORD

MY NAME IS FRED STERN AND I AM
THE EDITOR OF THIS EDITION OF
LISTING.

PLEASE NOTE THE NEW MAILING
ADDRESS FOR LISTING CORRES-
PONDENCE AT THE TOP OF THIS
PAGE.

THIS ISSUE REPRINTS SOME GREAT
ARTICLES FROM THE FOLLOWING
NEWSLETTERS:
T.S. HORIZONS

THIS INFORMATION IS REPRINTED
FOR THE BENEFIT OF US ALL, SO
THAT NEW USERS CAN LEARN AND OLD
USERS REFRESH THEIR RAMPACKS.

SPECIAL THANKS TO:
TOM SKAPINSKI
BOB GILDER
MIKE STERN
FOR THEIR HELP AND ASSISTANCE.

SEE YOU ALL AT THE NEXT MEETING.



SCREEN SNATCHER

MASSAPEQUA, NEW YORK, USA - BOB GILDER

Dilwin Jones Computing

Screen Snatcher is a powerful utility which has one purpose, to save a copy of the current screen display to disk, microdrive or RAM disk. This program may not appear to be of value to everyone using a QL, however, if you have ever wanted to save a copy of text mixed with some foreign characters while using QUILL or any other program, you will find that with the exception of Screen Snatcher, it can be extremely difficult and often times impossible to activate screen dump utilities. Why would you want to save a file from QUILL as a screen? More on this later.

Screen Snatcher will operate on any QL, from a standard 128K version up to the Two Meg Gold Card machine. The program, when loaded resides in memory alongside of your other programs and multi-tasks well.

My copy of Screen Snatcher arrived on disk (copies on microdrive cartridge are also available), and was accompanied by an eight page manual providing clear instructions on program requirements, program purpose, why the program was written, making a backup, starting the program, and numerous other topics. I glanced through the documentation and decided to load the program (after making a backup) to see how the program worked. A BOOT program is included, or Screen Snatcher can be loaded using 'EXEC flp1_SNATCH_obj'.

When the program is loaded a menu appears on the screen which allows the user to make changes to any of the default settings:

- | | | |
|---|----------------------------|------------------------|
| 0 | Snatch activate key | : CTRL + s |
| 1 | Filename for saved screen | : flp1_SNATCHED_scr |
| 2 | Key to abort screen snatch | : CTRL + q |
| 3 | Screen address | : standard (hex 20000) |
| 4 | Activate screen snatcher | : |

Up/Dn cursor keys=List F1=HELP F4=REDRAW ESC=QUIT

PRESS "SPACE" OR "ENTER" TO SELECT MENU ITEM

Please note that item 3, Screen address should be left as is unless you are using 'Minerva' and know the address of screen two.

Use of the up/down cursor keys allows placement of a highlighted bar to be used for selection of menu items 0 to 5. If you use Turbo QUILL then I would recommend that you change item '0, the Snatch activate key key combination CTRL + s' to another character as Turbo QUILL looks for a start-up file when loaded which is setup with CTRL + s as default!

Making a change is simple. Place the white bar over the item you wish to change and press SPACE or ENTER. Press CTRL and whatever character you wish to use as the Snatch Activate key and it will appear on the menu. Since I use Turbo QUILL, I changed the Snatch Activate key to CTRL + a.

You may want to change the default filename to something suitable to the file contents, and if you intend to save more than one file from the same or modified file you may consider

SNATCHER (cont'd)

adding a number as the last character of the name such as QUILL1_scr. The drivename can also be changed if you wish to use 'flp2_' or mdv1_' or any other media device.

I left the other items on the menu as is, and then selected item 4 on the menu, to 'Activate screen snatcher'. I then loaded QUILL with the command "EXEC_W flp1_QUILL". Within seconds the familiar QUILL screen appeared and I began typing in some text. I then pressed CTRL+ a and the drive light illuminated and the screen from QUILL was saved to disk.

Now, why would I want to save a screen from QUILL when all I have to do is to save the file as a document? The snatched screen is saved in a format that can be directly loaded into most QL Drawing and DeskTop Publishing programs. You can load your saved screens and edit them to compliment your artwork or use the artwork to complement your text.

Have you ever wanted to have a print-out of your printer translates after a session with INSTALL_bas? Have you ever used the SEDIT command in ARCHIVE to design a special screen, worked on it awhile, made some changes and then didn't like what was now on the screen and wished you could see what your original screen looked like? I am sure we've have all had these moments!

When you have saved a screen with Screen Snatcher, and want to view the file, enter the command 'LBYTES drivename_filename,131072'. The screen will immediately appear.

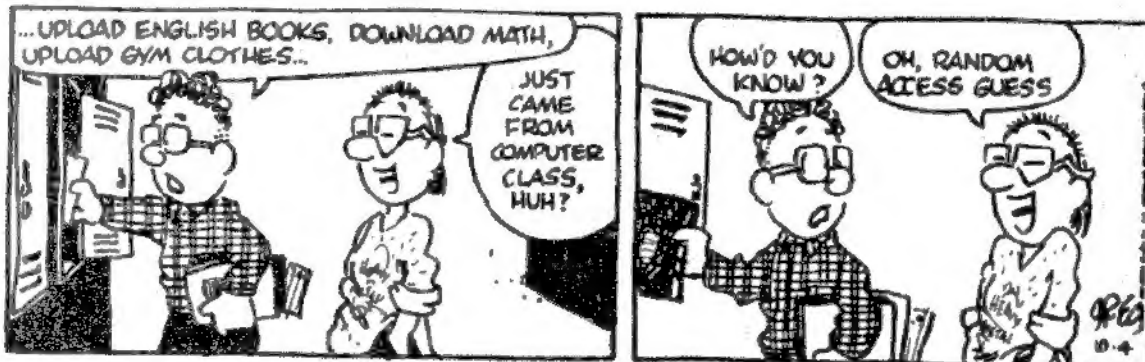
If you run into difficulty remembering which sequence is used for 'snatching', just press F1 and a small HELP file will come to your rescue.

How do I rate Screen Snatcher? On a scale of 1 to 10, a big TEN!

DILWYN JONES COMPUTING

41 BRO EMRYS, TAL-Y-BONT, BANGOR, GWYNEDD, GREAT BRITAIN, LL57 3 YT
TELEPHONE: 0248-354023

LUANN



SIMPLE RGB ADAPTER FOR THE T/S 2068

PARTS REQUIRED:

- 1- 35/70 contact edge connector, wire wrap pins
- 1- male, 64 contacts, finger connector
- 1- RCA phono plug
- 1- 5 wire cable to interface monitor, 3 - 4 feet

TOOLS REQUIRED:

- Fine blade saw (coping saw, hack saw or X-ACTO razor saw)
- Soldering iron with fine tip
- Needle nose pliers
- Small vise



STEP-1 CUTTING THE EDGE CONNECTOR TO SIZE.

Place the 35/70 contact edge connector in a vise and lightly tighten. Using a fine blade saw, carefully cut through the connector at the first (1st) contact. Count the contacts from the cut end to the 33rd contacts and mark with a pencil. Carefully cut through the 33rd contacts. You should have a connector with two equal rows of 32 contacts.

Cutting edge connector



STEP-2 INSTALLING THE KEYWAY IN THE CONNECTOR.

Starting from one end of the connector, count up to the 6th set of contacts and mark with a pencil. If your connector came with a plastic "T" key, insert the key into the 6th contacts and push down until it is locked in place. If you do not have a "T" key the you will have to make one from a piece of 1/16" plastic or P/C material. Using a needle nose pliers, pull out both (top and bottom) contacts in the 6th slots of the connector. Cut a section of plastic to fit into the vacant slots. Insert the key into the connector. It should be a snug fit-DO NOT FORCE INTO THE CONNECTOR! Trim the key if necessary. A drop of super glue can be applied to the key, however it is not necessary.

Installing key



STEP-3 MALE FINGER CONNECTOR.

Cut a section of .1" spaced P/C edge finger card to size - 32 fingers each side and approximately 3/4"-7/8" wide. At any end, count up to finger 6 and mark. Place the finger board in a vise and make 2 cuts into the 6th finger with a saw. Break out the narrow section of material remaining between cuts with a needle nose pliers. Smooth both sides of the slot with a file.

Male finger assy



STEP-4 ASSEMBLY.

Place the 64 contact edge connector wire wrap pins on a block of wood and apply upwards pressure on the body of the connector. The pins should uniformly bend towards the center of the connector. Turn the connector over and repeat the previous step. Carefully position the finger connector between both rows of wire wrap pins of the edge connector. Be sure that both connectors are at right angles of each other. Solder each wire wrap pin to the appropriate land on the finger board. Make sure that there are no solder bridges between contacts.

Assembly



STEP-5 RGB CONNECTIONS.

Position the connector assembly with the finger connector facing you (the key slot facing the left-hand side). This is the bottom of the assembly. Count up from the left-hand side of the connector to the 7th wire wrap pin (2nd pin after the slot) and solder a length of BLACK wire to this pin. This is the GROUND lead. Count down from the right-hand side of the connector to the 6th wire wrap pin and solder a RED wire to this pin. This is "R". Solder a length of GREEN wire to the 5th wire wrap pin. This is "G". Solder a length of BLUE wire to the 4th wire wrap pin. This is "B". Solder a YELLOW wire to the center contact of an RCA phono plug. This will plug into the MONITOR Jack on the 2068 to provide a SYNC signal for the RGB monitor. Slide a length of tubing over the 5 wires to form a cable. The free ends of the cable must be soldered to an appropriate connector to mate with the monitor.

Wire cable connections



The internal computer RGB modification instructions will be presented in next months L.I.S.T. -- see you then...Bob Gilder

NOTE: Bob Gilder's interface works beautifully and he found he didn't even need TIMEX's synch stripper, as the monitor (and most with NTSC input) has such circuits. If yours are disabled or inaccessible, you might need to build this little circuit. Again, we doubt it, but the circuit "couldn't hurt".

Attachment of an RGB Monitor



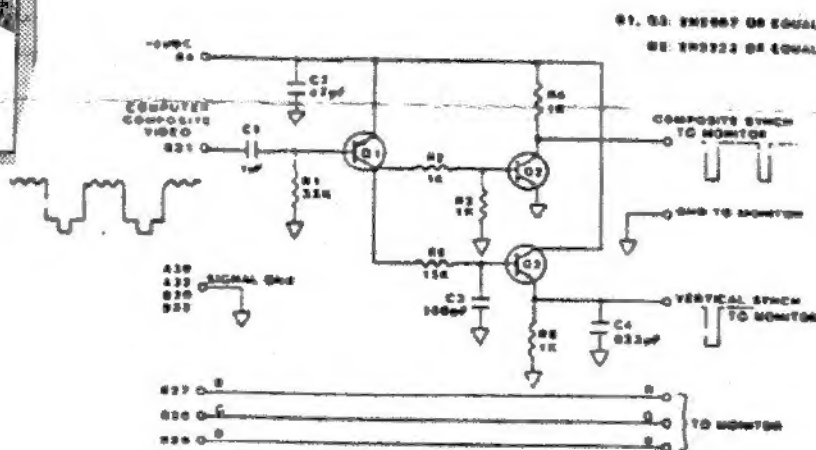
The TS 2068 provides via the P1 rear-edge connector the ability to attach an RGB monitor for excellent picture clarity and resolution. The TTL-level logic signals appear directly on the rear-edge connector of the TS 2068 -- the necessary synch signals can be derived from the simple synch stripper/separator circuit described here.

The Schematic of Figure 2.4.1-3 shows the required connections and electronics. Attachment is via the 64-pin keyed P1 connector. Shielding should not normally be required, but ferrite beads are recommended on each wire to minimize EMI, TVI, etc.

Circuit Operation - R1 and the base-emitter junction of Q1 operate as a DC restoration circuit with current flowing only when the composite video input signal from connector pin B31 is at the synch level. With the charge maintained on C1, Q1 conducts only during the synch pulse interval (not during the color burst time). During this conduction interval, the composite synch signal appears in inverted form on the collector of Q1. The Q2 stage simply re-inverts the signal, providing at its collector a composite synch signal for the connected monitor.

To provide a separated Vertical synch pulse, R3 and C3 filter the output of Q1 to partially eliminate the Horizontal synch pulses which are shorter than the Vertical synch pulses. The partially filtered inverted signal is re-inverted by Q3, then R6 and C6 complete the elimination of the Horizontal synch pulses so that a separate Vertical synch pulse is supplied for the attached monitor.

Signals R, G, and B from connector pins B27, B28, and B29 can be supplied directly to the attached monitor.



SCHEMATIC FOR RGB MONITOR CONNECTION

INTERNAL RGB/RESET BUTTON MODIFICATION FOR THE T/S 2068

WARNING: Modification requires opening the computer case, drilling one hole and cutting out a slot for a connector which will void any warranty from the manufacturer.

PARTS REQUIRED:

- 1- 9 pin "D" connector, female (same as JOY STICK connector).
- 1- small N/O push button switch for RESET.
- 2- 4-40 x 1/2 inch bolts and nuts to secure connector.
- 2 feet of plastic insulated hook-up wire.

TOOLS REQUIRED:

- Sharp knife (X-ACTO type).
- Soldering iron and solder.
- Small file.
- Drill bits and drill (holes for bolts and N/O push switch).
- Phillips screw driver.

MODIFICATION - MECHANICAL

Place the T/S 2068 on a flat surface which is covered with a towel or foam, on the keyboard side.

Remove each of the seven (7) Phillips-head screws.

Turn the case over on the back and carefully pry the case apart.

Hold the keyboard section at a right angle to the bottom section and remove three (3) Phillips screws securing the PC assembly to the case bottom.

With a pencil, mark the section on the inside, back of the case, the span between the "MONITOR" Jack and the small PC sub assembly (#335-80004). This is approximately two (2) inches.

Set aside the keyboard section with PC assembly.

Using the template provided, slowly and carefully cut into the case around the outline for the "D" connector. This will require repeated cutting.

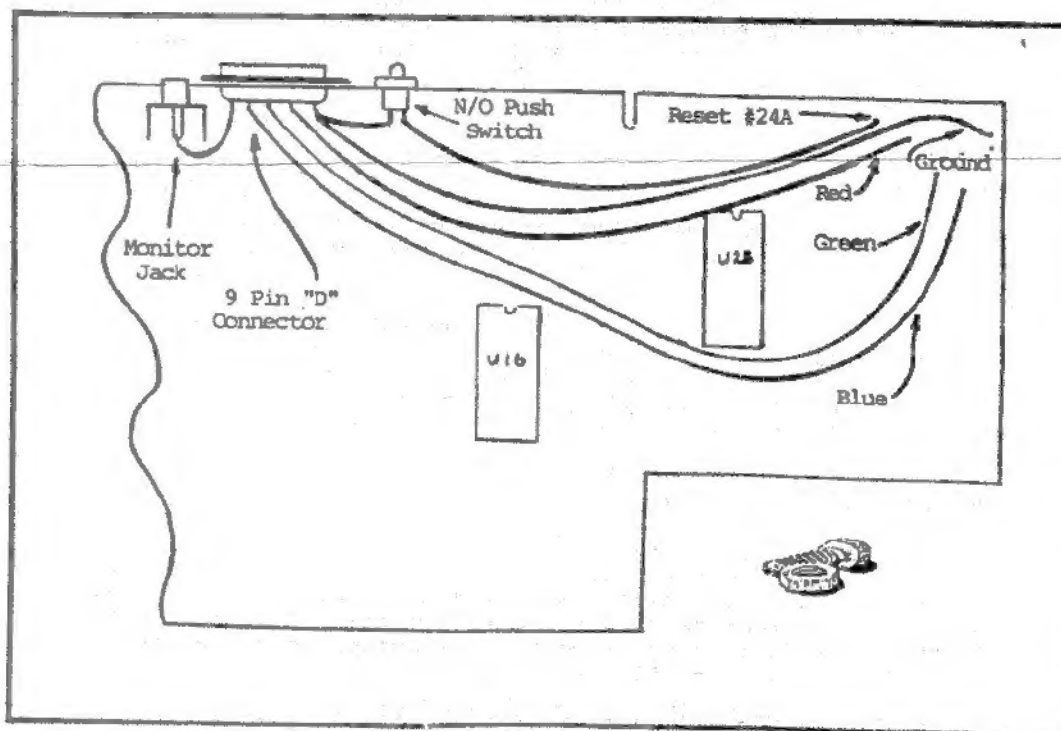
Fit the Female "D" connector into the opening from the outside of the case. If opening is too tight use a file to enlarge it.

Drill both holes for the bolts and secure the connector to the case with the 4-40 bolts and nuts.

Drill a hole for the N/O push switch.

Insert the switch into the hole previously drilled and secure with the hardware provided on the switch.

DIAGRAM 1: COMPONENT LAYOUT



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GROUP

L.I.S.T. Group

MODIFICATION - ELECTRICAL

Place the PC assembly into the bottom case. Do not secure with screws at this time. Prop up the keyboard section with a pencil.

Cut a short length of wire to connect to the lug of the push switch with the pin on the "D" connector which is closest to the switch. Solder the wire to the push switch ONLY.

Locate the GROUND (2 plated through holes) on the computer edge connector. This is at the far right-hand side of the edge connector.

Cut a length of wire to connect the GROUND at the edge connector with the same "D" connector terminal that the short wire will connect to from the push switch.

Solder both wires to the connector terminal and to a ground plated through hole.

From the GROUND terminal on the 2068 edge connector, locate the 9th terminal (#24A). This is RESET.

Cut a length of wire from the plated through hole which connects to the RESET terminal to the free lug on the push switch. Solder the wire in place.

Locate the three (3) plated through holes, which are located just below the edge connector at the far right of the PC assembly. These contacts are "RGB" respectively.

The upper hole is Red; the center hole is Green; and the lower hole is Blue.

Measure and cut three (3) lengths of wire to connect the RGB plated through holes to three terminals on the edge connector, then solder these wires in place.

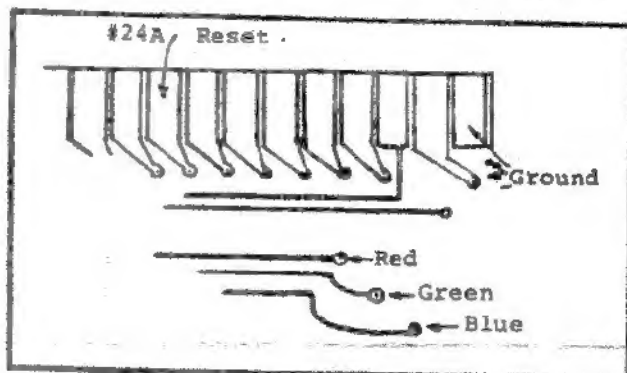
Measure a short length of wire from the connector to the center contact on the computer MONITOR Jack (This connection provides a SYNC signal to the RGB monitor).

Solder the wire in place.

Carefully inspect all of your solder connections to insure that they do not have shorts and/or solder bridges. When satisfied that everything is OK, replace the three (3) screws securing the PC assembly to the case bottom.

Carefully re-assemble the computer case with the seven (7) Phillips head screws previously set aside.

DIAGRAM 2: TOP, RIGHT-HAND SECTION OF 2068 EDGE CONNECTOR



CHECKOUT:

A mating connector from the 9 pin "D" connector is required for RGB checkout. The cable detailed from last months article (EXTERNAL RGB MODIFICATION) can be used if the cable ends are removed from that assembly and soldered to a MALE "D" connector.

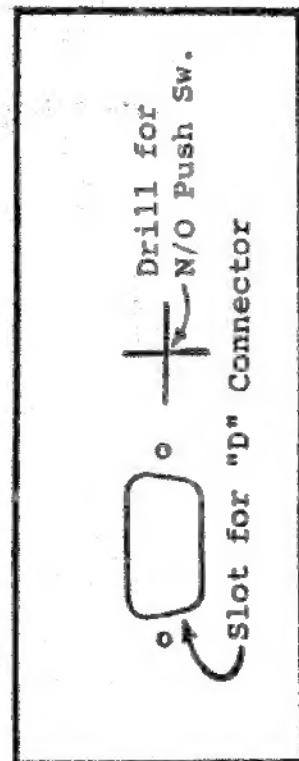
Power up the monitor and the computer. If all is well, the copyrite message should appear on the screen. If a problem exists, re-check all connections previously made. Press the RESET button. The screen will clear, then display the black box and then the copyrite message.

Key in the following short program, "COLOR BARS".

```
10 FOR b=1 TO 22: FOR p=7 TO 0 STEP-1
20 paper p: PRINT " "; REM 4 spaces between quotes
30 NEXT p: NEXT b
```

Behold the beautiful sharp image on the monitor screen that can only be possible with RGB.

FULL SIZE CUTTING AND DRILLING TEMPLATE-RGB MODIFICATION



LONG ISLAND SINCLAIR TIMEX

USERS GROUP PRESENTS

ZX-81 AND TS1000

TECHNICAL TIPS

PART II

TV NOISE AND SQUIGGLY PICTURE, AND I HAVE DISCONNECTED MY NORMAL ANTENNA!!

Here's a cute trick that WORKS!!

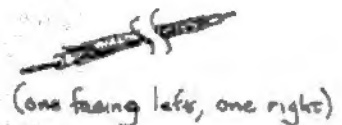
MATERIALS: • 10 to 15 ft of RG-59 Coax Cable

• Two phono connectors

• Soldering iron, Solder

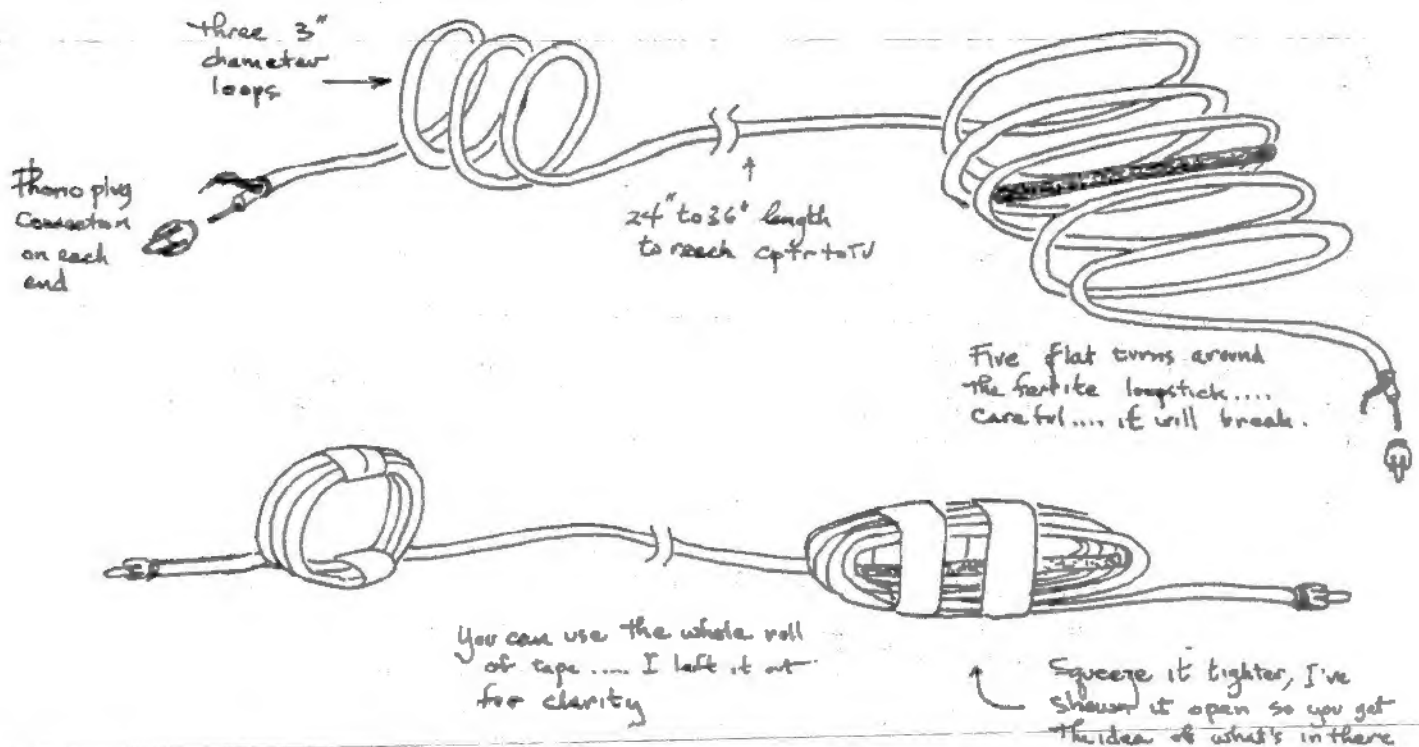
• Black Plastic Electrician's Tape

• Ferrite loopstick antenna core



What The am I building??

• A replacement for the Coax Video cable from Computer to TV.



Radio Shack can help you with "What is a ferrite loopstick"? Or if you have an old portable radio that you have been meaning to throw away, ... They usually had one ... looks like a long solid black pencil $\frac{1}{4}$ " diameter and no wood

Connect this unlikely looking assembly between Video output of computer and Video input on the "game"-TV switch and see what a solid, clear, non-jitter picture really looks like!!

Jack Schneider

THE STOPPER by Walt Coleman

For the 16K T/S-1000

Originally appeared in "T/S Horizons" No. 16, November 1985

Have you ever thought you'd like a backup copy of a valued program but couldn't break into it to save it? Or have you admired a feature of a program and wanted to look at it to see how it's done? Then this short (12 byte) program is for you.

The 8K Sinclair ROM provides features many more expensive computers lack. Unfortunately, to accomplish this, many M/C routines are intertwined and using them for our own purposes are difficult if not impossible. Many sources will provide the starting addresses of the LOAD (832 dec.) and BREAK (930 dec.) routines. But how can we combine these to load a program and then stop it so we can list or save it?

For you M/C lovers, the first three bytes of the LOAD routine in turn calls another routine whose purpose it is to identify the name of the program to be loaded. If there is no name, as in the case of LOAD"" then the Carry Flag is set and the seventh bit of the D register is set to 1. If the Carry Flag can be set and the D register loaded, this routine can be bypassed and the LOAD routine accessed by a USR call. The first program it comes to on a tape will be loaded. If we follow the load routine call by a break routine call we will have accomplished our purpose of loading and stopping our "unbreakable" tape.

MNEMONIC	COMMENT
LD A, 1	Force Carry
SRA A	Flag to 1
LD D, 0	Set D Register
Call 835(dec.)	Access LOAD routine 3 bytes in
Call 930(dec.)	Access BREAK routine

So much for the technical aspects, let's get down to the implementation. For the STOPPER to work, the T/S-1000 must be in FAST mode and the program must be outside of RAM so it will not be overwritten by the program we are loading. To do this we will reserve a minimal area above RAMTOP. STEP 1: FAST // STEP 2: POKE 16388, 242 ; POKE 16389, 127 ; NEW ; FAST // STEP 3: Enter the following program: 10 LET S=0 ; 20 FOR I=1 TO 12 ; 30 INPUT A ; 40 POKE(32754 + I), A ; 50 LET S= S + A ; 60 NEXT I ; 70 PRINT AT 0,0; "SUM= "; S // STEP 4: RUN the program and enter this list on numbers: 62, 01, 203, 47, 22, 00, 205, 67, 03, 205, 162, 03. // STEP 5: Your total should be 980. If not, repeat steps 3 and 4. // STEP 6: Now use STOPPER by entering RAND USR 32755 and turning on your tape recorder. If the load has been successful you will view a blank screen with the message D/O. If not, use the "usual" recorder adjustments to correct a normal unsuccessful LOAD and try again from step 6. -- Walt Coleman.

